



PUBLIC WATER DISTRIBUTION SYSTEM EXTENSION OR MODIFICATION APPLICATION

INSTRUCTIONS FOR FORM: WDSEM

The City of Concord will not accept this application unless all of the following instructions are adhered to: Prior to the submittal of an application package for publicly maintained and operated water distribution system extensions/modifications, the civil engineering design drawings shall be approved through the appropriate technical review process as required by the Director of Engineering and defined by the City of Concord Development Ordinance. The design drawings must be prepared in accordance with Subchapter 15A NCAC 18C of the North Carolina Administrative Code, the Water and Sewer Authority of Cabarrus County's "Standard Specifications for Wastewater Collection and Water Distribution Construction for Cabarrus County," the City of Concord Code of Ordinances, and good engineering practices. Failure to submit all of the required items will lead to additional fees and processing and review time for the application.

A. Application Form: (All Application Packages):

- ☐ Submission of an executed application form. Incomplete applications may result in the application being returned. The City of Concord will only accept application packages that have been fully completed with all applicable items addressed.
- ☐ The project name should be consistent with the project name on the plans and supporting data.
- ☐ If this project involves a modification of an existing "Authorization to Construct," submit one copy of the existing "Authorization to Construct." Please note that modifications must meet current design standards.

B. Application Fee: (All Application Packages):

- ☐ Each application shall be subject to an Engineering Review fee in the amount as required by the current "City of Concord Fiscal Year Fees and Charges Schedule" A copy current City of Concord Fiscal Year Fees and Charges Schedule can be viewed on the City of Concord web page at www.concordnc.gov under "Departments" – "Finance" - "Adopted Fees Schedule"

C. Digital Copy of Plans (All Application Packages):

- ☐ Submit one digital copy of the complete design drawings in PDF format are to be uploaded to the Accela online portal in the applicable case at <https://accela1.cabarruscounty.us/CitizenAccess/>, unless otherwise specified.

D. Detailed Plans and Specifications: (All Application Packages):

- ☐ Submission of the **final design drawing plan set** must be signed, sealed, and dated by a N.C. Professional Engineer. The Water and Sewer Authority of Cabarrus County's "Standard Specifications for Wastewater Collection and Water Distribution Construction for Cabarrus County" and the City of Concord Development Ordinance and Code of Ordinances Utilities Article and Technical Specifications must be adhered to without exception. **Use of the Water and Sewer Authority of Cabarrus County's (WSACC) "Standard Specifications for Wastewater Collection and Water Distribution Construction for Cabarrus County," and the City of Concord Development Ordinance, Code of Ordinances Chapter 62 and Technical Standards must be noted on each sheet of the plans.**
- ☐ Design plans must include but shall not be limited to the following minimum items:
 - Water distribution system extensions and/or modifications shall be designed in accordance with all applicable federal, state, and local regulations and standards.
 - Engineering plans shall be sealed by a North Carolina registered professional engineer and submitted on 24-inch by 36-inch sheets with the approved City of Concord border and logo.
 - The horizontal scale shall be one-inch equals 40 feet and the vertical scale shall be one-inch equals 4 feet.
 - A general location map, a North arrow, plan and profile views of the water extension as well as the proximity of the sewer extension to other utilities and natural features, and detail drawings of all items pertinent to the water extension.
 - Depict minimum separations on the plans, in accordance with 15A NCAC 18C and the City of Concord's ordinance, policies, and specifications. Clearly indicate on the plans, the sections where the minimum separations cannot be maintained and the ferrous pipe material is required.
 - Minimum cover over water extensions must also be shown clearly on the plans, in accordance with 15A NCAC 18C and the City of Concord's ordinance, policies, and specifications.
 - Plans and specifications must not be labeled with preliminary phrases (e.g., FOR REVIEW ONLY, NOT FOR CONSTRUCTION, etc.) that indicate that they are anything other than final plans and specifications.

- ☐ Cross connection control in accordance with the City of Concord Water Resource Department's "Backflow Prevention Ordinance and Cross Connection Control Ordinance" must be specified on the drawings and details provided.
- The City of Concord Backflow Manual and details can be viewed on the City of Concord web page at www.concordnc.gov under "Departments" – "Water Resources" – "Backflow Prevention Documents" or a copy can be obtained from the Water Resources Department.
- E. **Engineering Calculations** (All Application Packages):
- ☐ Hydraulic design calculations signed, sealed, and dated by a N.C. Professional Engineer for the proposed public water system and domestic service and fire service, as applicable.
- ☐ The proposed extension shall be able to produce the required fire flows, including but not limited to any necessary pumping or storage, throughout the proposed extension without negatively impacting the existing system. Documentation of this ability shall be submitted to the Director of Engineering or his/her designee for approval.
- F. **City of Concord Water Distribution System Technical Design Checklist (WDSTD-Checklist):**
- ☐ The proposed water distribution system design conforms to the requirements indicated in City of Concord Water Distribution System Technical Design Checklist.

A DIGITAL COPY OF THE COMPLETED APPLICATION PACKAGE, INCLUDING PLANS, SUPPORTING INFORMATION AND MATERIALS, SHOULD BE UPLOADED TO ACCELA ONLINE PORTAL IN THE APPLICABLE CASE AT <https://accela1.cabarruscounty.us/CitizenAccess/> , UNLESS OTHERWISE SPECIFIED.

<p><u>For Accela Case Inquiries, Contact:</u></p> <p>CITY OF CONCORD Planning & Neighborhood Development- Zoning Services Post Office Box 308 Concord, North Carolina 28026-0308 Telephone Number: (704) 920-5152</p>	<p><u>For Engineering Design Inquiries, Contact:</u></p> <p>CITY OF CONCORD Engineering Department Post Office Box 308 Concord, North Carolina 28026-0308 Telephone Number: (704) 920-5425</p>
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WATER DISTRIBUTION SYSTEM EXTENSION OR MODIFICATION APPLICATION

(THIS FORM MAY BE PHOTOCOPIED FOR USE AS AN ORIGINAL)

TO BE COMPLETED BY THE CITY OF CONCORD

Planning Project No:	
Engineering Project No:	
ATC No:	

A. Project Information	1.)	Project Title: <small>(Project name of title as indicated on the drawings)</small>					
	2.)	Description of project location:	<small>(Example: Site located on (Road name) SR ####, approx #### linear feet (North, South, West or East)of the intersection of Road name (SR #####) and Road Name (SR ####)</small>				
	4.)	Cabarrus County Parcel Identification Number:		4a.) Parcel Acreage:			
	5.)	Site Zoning and use:		5a.) Min. Fire Flow (Per NC Fire Code)	gpm @ 20 psi		
	6.)	Area Commercial or Industrial Building	(sq. ft.)	6a.) Estimated Water Usage:		% Domestic	
						% Commercial	
						% Industrial	
						% Other use (Specify)	
	7a.)	Description of Facility to be served.		7b.) Number of Lots		7c.) Number of Units	
	7d.)	Additional description information:					

B. Applicant Information	<div style="text-align: right;">(Title)</div>		<div style="text-align: right;">(Applicant's Street or Box Number)</div>	
	<div style="text-align: right;"><small>(Name of legal owner, board, council, and/or authorized official with title; as defined in property records and/or a registered agent(s) as listed in the NC Secretary of State Corporation filings, hereby referred to as the Applicant.)</small></div>		<div style="text-align: right;">(Applicant's City, State, Zip Code)</div>	
	<div style="text-align: right;"><small>(Name of Applicant's company, city, town, corporation, sanitary district, water company or other defined in property records and/or as listed in the NC Secretary of State Corporation filings, as applicable.)</small></div>		<div style="text-align: right;">(Applicant's Phone Number)</div>	
	<div style="text-align: right;">(Applicant's Phone Number)</div>		<div style="text-align: right;">(Applicant's Facsimile Number)</div>	
	<div style="text-align: right;">(Name)</div>	<div style="text-align: right;">(Email)</div>	<div style="text-align: right;">(Applicant's Email Address)</div>	
	<div style="text-align: right;"><small>(Name with Title and Email of contact person, who can answer questions about application)</small></div>		<div style="text-align: right;">(Applicant's Email Address)</div>	
	REQUIRED Applicant is to attach documentation of their signature authority if signing for a corporation and documentation of ownership if signing as owner.			

E. Engineer's Report	
1a.) _____ Owner of the Existing Water Main at Tie-in(s)	1b.) _____ Existing Water Main Diameter(s)
2.) Volume of water demand <u>to be allocated</u> for this particular project: _____ gallons per day. (Do not include future demands or previously allocated water demand.) For water demand > ZERO : COMPLETE ITEM 4. For water demand = Zero : COMPLETE ITEM 3.	
3.) If the water demand is zero , indicate why: <input type="checkbox"/> Transmission Mains or hydraulic loops where water demand will be allocated in subsequent approvals that connect to this extension <input type="checkbox"/> Water demand previously allocated in ATC Number: _____ or Water demand allocation in NCDEQ water permit. (Documentation of the NCDEQ permit approval must be provided.) <input type="checkbox"/> Rehabilitation or replacement of existing water mains with no new water demand expected (see 15A NCAC 18C to determine if an application is required) <input type="checkbox"/> Other: _____.	
4.) Provide the water demand calculations used in determining the allocated potable water demand in accordance with the value indicated in Item E(2) AND/OR the design demand for transmission main or hydraulic loop main sizing if zero demand is being requested in Item E(3). Values other than that in defined in table b(1) or b(2) in 15A NCAC 18C .0409 must be supported with actual water use data. (Note: All attachments must be sealed in accordance with (NCGS 89C))	

5a.) Maximum daily demand of the project: Peak potable water daily demand plus minimum fire flow times NC Fire Code Duration (hour) {(Average Water Demand in gpd X Peaking Factor) plus (Minimum fire flow demand X NC Fire Code Duration Fire Demand) in gallons}			(gallons per day)
5b.) Peak demand of the project: Peak potable water daily demand plus minimum fire flow {(Average Water Demand X Peaking Factor) plus (Minimum fire flow demand in gpm at 20 psi)}			(gallons per minute)
6.) If the water system does not provide fire flow, indicate the minimum calculated pressure at domestic peak water demand (non-fire flow): _____ Psig Per Title 15A NCAC 18C Rule 0.0901 – A minimum pressure of 30 psi must be maintained throughout the system. Attach the supporting calculations in confirmation that the calculated system pressure indicated above and the proposed system complies with the Title 15A NCAC 18C Rule 0.0901.			
7.) If the water system does provide fire flow, indicate the minimum calculated pressure at domestic peak water demand [Potable (Domestic) plus fire flow]: _____ Psig Per Title 15A NCAC 18C Rule 0.0901 – A minimum pressure of 20 psi must be maintained throughout the system. Attach the supporting documentation and calculations in confirmation that minimum system pressure indicated above complies with the Title 15A NCAC 18C Rule 0.0901.			
8.) Does the project meet the fire flow requirements specified by the public water system?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> N/A	
9.) Summary of water mains to be constructed (Attach additional sheets if necessary)			
Diameter (in.)	Length (lin. ft.) <small>(Exclude hydrant legs and services)</small>	Low Elevation (ft.)	High Elevation (ft.)
Quantity of the Main-line Valves <small>(Exclude blow-off assembly valves)</small>			
10.) Number of hydrants with guard valves	11a.) Number of air-release valves	11b.) Station location of air-release valves	11c.) Elevation of air-release valves
General Water System Hydraulic Information			
12.) Closest existing fire hydrant - (Include location on hydraulic calculation plans for reference)			
Road name/location and distance from project tie-in.	Static Pressure (Pounds per sq. in.)	Flow Rate (gpm)	Residual Pressure (Pounds per sq. in.)
13.) Applicable Pressure Zone - (Elevated Storage Tank)			
Name	Location	Tank Capacity Elevation (BC Elevation -Tank Floor)	Pressure Zone Elevation (Tank Overflow)
		Hydrant Test Report- Water Level	Distance from proposed water system connection in (miles)
REQUIRED - Attach sealed hydraulic calculation report(s) with Fire Hydrant Flow Test Report and exhibits.			
DESIGN COMPLIANCE CERTIFICATION			
14.) Does the subject water distribution system comply with the (latest version) of State of North Carolinas' Administrative Code, Subchapter 15A NCAC 18C, the Water and Sewer Authority of Cabarrus County Standard technical Specifications for wastewater Collection and Water Distribution Construction for Cabarrus County, and the City of Concord Development Code, Code of Ordinances, Policies and Technical Standards; as applicable? <input type="checkbox"/> Yes <input type="checkbox"/> No If No , to City of Concord Design Standards; please reference the pertinent minimum design criteria and indicate why an exception is requested. SUBMIT TWO COPIES OF SPECIFICATIONS OR CALCULATIONS PERTINENT TO THE EXCEPTION WITH YOUR APPLICATION.			

F. OTHER PERMITS

15.) Have the following permits/encroachments/certifications been submitted for approval for the proposed water system or the associated project? **If "yes," submit a copy of all applicable permits/encroachment forms.**

US Army Corp 404 or NCDENR DWQ 401wetland permit?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Sedimentation and Erosion Control Plan?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Stormwater Management Permit?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
NCDOT Encroachment?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Environmental Assessment?	<input type="checkbox"/> Yes	<input type="checkbox"/> N/A	

(If Yes, Submit FONSI or EIS)

City of Concord Certification: TO BE COMPLETED BY THE CITY OF CONCORD

These plans and specifications cited in the foregoing application, including any provisos in the approval letter, are approved insofar as the protection of public health is concerned as provided in the rules, standards and criteria adopted under the authority of NCGS 130A-315 and 130A-317. This approval does not address all applicable laws, rules, standards and criteria, and other approvals and licenses that may be required by the local, state or federal government. This approval is given with the understanding that upon installation of such works, its operation shall be placed under the care of a competent person, and the operation shall be carried out according to best accepted practice and in accordance with the recommendations of the City of Concord through the delegated authority of Division of Environmental Health.

Any erasures, additions or alterations of the proposed improvements except those permitted in 15A NCAC 18C .0306 will make this approval null and void. This approval does not constitute a warranty of the design, construction or future operation of the water system. THE CITY AND ITS STAFF ARE NOT RESPONSIBLE FOR ERRORS IN DESIGNS, CALCULATIONS, DRAWINGS OR STATEMENTS SUBMITTED BY APPLICANTS, THEIR TECHNICAL CONSULTANTS, SURVEYORS OR ENGINEERS. THE CITY AND ITS STAFF ARE NOT RESPONSIBLE FOR FINDING OR CORRECTING ANY ERRORS OR DEFICIENCIES IN PLANS SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL. THE CITY OF CONCORD DISCLAIMS ANY LIABILITY FOR ERRORS CONTAINED IN PLANS SUBMITTED TO THE CITY. THE SIGNATURE OF THE CITY ENGINEER MAY NOT BE RELIED UPON TO ESTABLISH ANY DUTY OR RELATIONSHIP (SUCH AS A THIRD PARTY BENEFICIARY) WITH ANY PARTY USING THIS PLAN OR DRAWING. PARTIES USING THIS DOCUMENT SHOULD CONDUCT THEIR OWN REVIEW AND ANALYSIS FOR MAKING DECISIONS IN RELIANCE ON THIS DOCUMENT.

The official copies of plans and specifications accompanying this application have been sealed and stamped with the Authorization to Construct (ATC) number for this application _____.

I, **M. Sue Hyde, P.E.,** attest that this application has been reviewed by me and contains sufficient information to ascertain reasonable grounds to believe the application package and its contents meet all applicable standards of Subchapter 15A NCAC 18C, the State of North Carolina's Administrative Code, the Water and Sewer Authority of Cabarrus County Standard Specifications and the City of Concord's ordinance, policies and specifications as presented. The denial of the issuance of a permit, subject to the provisions in Article III, Chapter 62 of the City of Concord Code of Ordinances shall be made in writing and shall contain the reasons for the denial and the City's estimate of the general changes in the applicant's proposed activities or plan which will be required in order that the applicant may obtain a permit. Nothing in such estimate shall preclude or otherwise bar the City from denying a permit, which incorporates such changes, based upon changed circumstances or information not previously known by the Director of Engineering or the applicant.

Signature: _____, **Date:** _____,

M. Sue Hyde, PE, Director of Engineering

Professional Engineer's Certification:

As a duly registered Professional Engineer in the State of North Carolina, I certify that this application has been reviewed by me and is accurate, complete and consistent with the information supplied in the engineering plans, calculations, and all other supporting documentation to the best of my knowledge. I further attest that to the best of my knowledge the proposed design and supporting documentation has been prepared in accordance with and subject to the Water and Sewer Authority of Cabarrus County's standard specifications; the City of Concord's ordinances, policies, and standard specifications, and the North Carolina Administrative Code for water distribution systems. In the event of conflict between the Water and Sewer Authority of Cabarrus County's standard specifications; the City of Concord's ordinances, policies, and standard specifications, or the North Carolina Administrative Code, the more restrictive requirements shall apply. Although other professionals may have developed certain portions of this submittal package, inclusion of these materials under my signature and seal signifies that I have reviewed this material and have judged it to be consistent with the proposed design. Although the attached City of Concord Water System Supplied information report incorporates data provided by others, inclusion of these materials under my seal signifies that I have reviewed this material and have judged it to be consistent with the proposed design. Note: In accordance with NC General Statutes 143-215.6A and 143-215.6B, any person who knowingly makes any false statement, representation, or certification in any application shall be guilty of a Class 2 misdemeanor, which may include a fine not to exceed \$10,000 as well as civil penalties up to \$25,000 per violation, and referral to the State Board of Registered Professional Engineers and Surveyors.

(Signature of North Carolina Professional Engineer)

(Company Name)

(Type Name Signed Above)

(Street or Box Number)

(NCPE Registration Number)

(City, State, Zip Code)

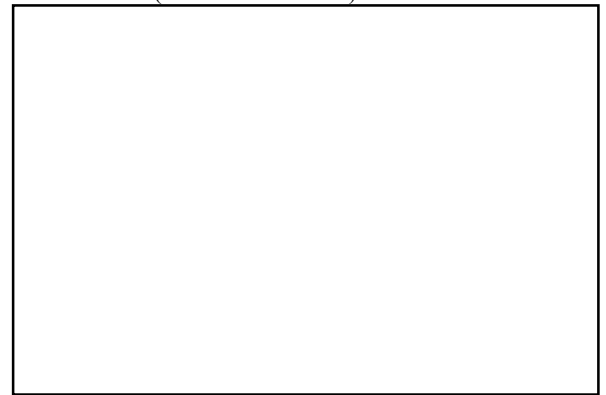
(Seal & Signature Date)

(Email Address)

(Phone Number)

(Facsimile Numbers)

(Engineer's seal)

**Applicant's Certification:**

This application is made under and in full accord with the provision of NCGS 130A-317, and such other statutes as related to public water systems. The applicant agrees that no change or deviation from the engineering plans and specifications approved by the Division of Environmental Health will be made except as allowed by 15A NCAC 18C .0306 or with the written consent and approval of the City of Concord Director of Engineering or the Directors' authorized representative. The applicant agrees that a professional engineer licensed to practice in the State of North Carolina shall submit a statement reflecting that adequate observations during and upon completion of construction, by the engineer or by a representative of the engineer's office who is under the engineer's supervision, indicates that construction was completed in accordance with approved plans and specifications. I understand that if all required parts of this application are not completed and that if all required supporting information and attachments are not included, this application package will be returned to me as incomplete. Any application package determined incomplete by the Director of Engineering shall be returned to the applicant. Revised engineering plans and specifications shall constitute a re-submittal, shall be accompanied by a new fee, and shall require additional time for review. Note: In accordance with NC General Statutes 143-215.6A and 143-215.6B, any person who knowingly makes any false statement, representation, or certification in any application shall be guilty of a Class 2 misdemeanor, which may include a fine not to exceed \$10,000 as well as civil penalties up to \$25,000 per violation.

(Signature of legal owner, board, council, and/or authorized official with title; as defined in property records and/or a registered agent(s) as listed in the NC Secretary of State Corporation filings.)

(Applicant's Street or Box Number)

(Applicant's Typed Name & Title of signing entity)

(Applicant's Signature Date)

(Applicant's City, State, Zip Code)

(Applicant's Phone Number)

(Applicant's Email Address)

City of Concord Water System-Supplied Information Form

(Water System ID No: 01-13-010)

Annual Report 2021

Engineer's Initials:		Date of Initials:	
The form must be initial and dated by the Consultant Engineer			

City Use Only: Data Reference - City of Concord Local Water Supply Report 2020	
Signature: <u>M. Sue Hyde</u> M. Sue Hyde, City of Concord Director of Engineering	Date provided: <u>2/25/2021</u>
Number of current connections in water system <i>(Reference Local Water Supply Report – Item 2 - Meter Connections total)</i>	<u>44,764</u> connections *
Approved number of connections in water system <i>(Local Water Supply Report - Not applicable)</i>	N/A – local government system
Current average and maximum day demand of existing system Average day demand is the one day average demand for the latest calendar year. <i>(Reference Local Water Supply Report – Item 3 - Water Supply Sources -Average Daily Use (MGD of Raw Water Withdrawals))</i> <i>(Reference Local Water Supply Report – Item 3 - Water Supply Sources -May Day Daily Use (MGD of Raw Water Withdrawals))</i>	<u>12.874</u> average Million gpd * <u>16,699</u> maximum Million gpd *
Current maximum daily treated water supply of existing system Maximum daily treated water supply is the maximum quantity of treated water that can be produced and/or purchased by the system. <i>(Reference Local Water Supply Report – (Reference Local Water Supply Report – Item 3 - Base on contract with Charlotte 5.0 MGD, contract Albermarle 5.0 MGD, Lake Howell withdrawal limit 12.1 MGD, and Fisher & Concord Lake withdrawal limit of 5.1 MGD = TOTAL Permitted Capacity of 27.1 MGD))</i>	<u>27.2</u> maximum Million gpd *
Total elevated storage capacity of existing system <i>(Reference actual Elevated Storage Tank TOTAL Permitted Capacity)</i>	<u>6.75</u> Million gallons
Total ground storage capacity of existing system <i>(Reference actual Ground Storage Tank TOTAL Permitted Capacity)</i>	<u>8</u> Million gallons
Total hydropneumatic storage capacity of existing system N/A	<u>N/A</u> Million gallons
Contractual storage with other system(s) Attach a copy of the agreement with the providing system N/A	<u>0</u> Million gallons
Systems > 300 connections or systems < 300 connections without hydropneumatic storage: <ul style="list-style-type: none"> Total storage volume is at least half the average annual daily demand (Rule .0805(c)) Has elevated storage or meets high yield aquifer criteria (Rule.0405(d)) For municipalities, at least 75,000 gallons elevated storage and at least half the average day demand combined elevated and ground finished water storage (Rule .0805(b)) 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Systems with hydropneumatic storage tanks up to 300 connections: <ul style="list-style-type: none"> Volume of hydropneumatic storage tank is sufficient to meet peak demands based on Rule .0802 and calculations in Appendix B, Figure 6 For residential community systems, volume of hydropneumatic storage tank is at least 40 times the number of connections or 500 gallons, whichever is greater (Rule .0803) For mobile home park systems, volume of hydropneumatic storage tank is at least 25 times the number of connections or 500 gallons, whichever is greater (Rule .0803) For campground systems, volume of hydropneumatic storage tank is at least 10 times the number of connections or 500 gallons, whichever is greater (Rule .0803) 	Not applicable. <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
City of Concord 2021 WSSI FORM (*Reference data - 2020 Local Water Supply Planning Report)	